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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

IN RE CYGNUS TELECOMMUNICATIONS
TECHNOLOGY, LLC, PATENT
LITIGATION

THIS ORDER RELATES TO:
All Actions

No. MDL-1423
This Order Applies to All Actions

C-02-00142 RMW
C-02-00145 RMW
C-02-05437 RMW
C-03-03378 RMW
C-03-03594 RMW
C-03-03596 RMW
C-03-04003 RMW
C-04-03001 RMW
C-04-03365 RMW
C-04-04247 RMW
C-04-04359 RMW
C-06-03843 RMW
C-06-04295 RMW
C-06-06479 RMW

**CLAIM CONSTRUCTION ORDER AND
ORDERS ON VARIOUS SUMMARY
JUDGMENT MOTIONS**

[MDL-1423 Docket #'s 634, 674, 675, 679,
686, 688, 690, 706, 746, 751, and 755 and C-
03-04003 Docket # 102]

Cygnus has sued numerous defendants for infringement of U.S. Patent Nos. 5,883,964 ("964 patent") and 6,035,027 ("027 patent"). Proceedings from various districts across the country have been consolidated before this court. Cygnus asserts claims 1 and 6 of the '964 patent and claims 1,

6, and 11 of the '027 patent. Since Cygnus sought to amend claims 6 and 11 of the '027 patent in reexamination proceedings and the Patent and Trademark Office ("PTO") issued a final rejection on those claims, the claims remaining at issue here are claims 1 and 6 of the '964 patent and claim 1 of the '027 patent.¹ The parties seek construction of a number of claim terms, which are construed below. The defendants move for summary judgment that the patents-in-suit are invalid under 35 U.S.C. §§ 102(b), 103(a), and 112. The parties cross-move for summary judgment on infringement.

I. CLAIM CONSTRUCTION, INDEFINITENESS, WRITTEN DESCRIPTION & ENABLEMENT

A. Introduction

In an order filed on July 29, 2004, the court ruled on motions for summary judgment brought by certain defendants. The original prosecution history of the patents-in-suit was set forth in detail in that order and will not be repeated here. Necessary to that ruling was the construction of certain claim terms, including "direct inward dial number." The participating parties in these consolidated actions have now briefed and argued construction of the claims of the patents-in-suit. The court allowed Cygnus to reargue the construction of "direct inward dial number." The other terms at issue have not been considered previously.

Defendants take the position that certain claim terms cannot be construed because they are indefinite. Defendants' motion for summary judgment that the patents-in-suit are invalid under § 112 is directed primarily to the alleged indefiniteness of certain phrases of the patents-in-suit. Because of the substantial overlap between defendants' claim construction positions and their motion for summary judgment under § 112, the court will address both together.

¹ Both patents-in-suit have been subsequently subjected to reexamination proceedings, Nos. 90/007,308 and 90/007,309. All claims of the '964 patent were confirmed, as well as claim 1 of the '027 patent. Cygnus has attempted to modify claims 6 and 11 of the '027 patent, and on December 19, 2006, the PTO issued a final rejection of those claims. All of the terms to be construed appear in at least one of the confirmed asserted claims, and the court will not consider Cygnus's proposed amendments to claims 6 and 11 of the '027 patent since those amendments have not yet been accepted by the examiner during the reexamination. Cygnus's deadline for responding to the examiner's rejection of claims 6 and 11 was February 19, 2007. *See* Office Action, App. 90/007,309 (Dec. 19, 2006) at 37.

1 **B. Construction of Disputed Terms**

2 **1. "After the subscriber terminates the incoming call attempt"**

3 It is not clear why the parties do not agree on what "after" means. The "control means" of
 4 claim 1 of the '964 patent must have the ability of "calling the subscriber remote telephone number
 5 through the first telephone connection means after the subscriber terminates the incoming call
 6 attempt and connecting to the subscriber telephone station." Defendants argue that "after the
 7 subscriber terminates the incoming call attempt" means that the subscriber is not called back "until a
 8 detection of the subscriber telephone handset going 'on-hook' to hang-up." Cygnus states that the
 9 phrase does not need construction, but also says that the phrase should be read to mean that the
 10 subscriber terminates the call before he is charged for it. Cygnus's support for this latter argument is
 11 that claim 11 of the '027 patent is a Jepson-style claim directed to "the improvement comprising
 12 using direct inward dialing for the initial call from the subscriber to the service, and the subscriber
 13 hangs up before there is a charge for the call from the subscriber to the service." Cygnus asserts that
 14 this claim "makes explicit what was implicit in the earlier patent."

15 The term "after" is not a technical telecommunications term but rather an ordinary English
 16 word. The limitations each side wish read into "after the subscriber terminates the incoming call
 17 attempt" are not supported by the clear language of the claim. "After the subscriber terminates the
 18 incoming call attempt" has a plain meaning and needs no interpretation.

19 **2. Whether method steps must be performed in order listed**

20 The Federal Circuit has developed a two-part test for determining whether a series of steps in
 21 a method claim which does not recite that the steps must be performed in the order written must
 22 nevertheless be performed in that order. *See Interactive Gift Express, Inc. v. Compuserve Inc.*, 256
 23 F.3d 1323, 1342-43 (Fed. Cir. 2001). First, the court must consider whether the claim language as a
 24 matter of logic or grammar requires any particular order. *Id.* Second, the specification must be
 25 considered to determine if it reveals that a certain order of steps is required. *Id.*

26 It is not clear which claims defendants argue must be performed in the order written. The
 27 parties' joint claim construction statement refers to claim 6 of the '964 patent and claim 6 of the '027
 28

1 patent, while defendants' claim construction brief refers to claims 1 and 6 of the '964 patent. Cygnus
2 argues that no claim requires a specific sequence of steps.

3 Claim 1 of the '964 patent is an apparatus claim and as such, it is not performed, much less
4 performed in a specific order. Claim 6 of the '027 patent currently stands rejected by the PTO after
5 amendment. The court will therefore consider only the order of steps for claim 6 of the '964 patent.

6 Claim 6 of the '964 patent is

7 A method establishing a telephone communication link between a subscriber
8 telephone station and a destination telephone station, both being connected through a
9 telephone exchange, comprising the steps of:

10 [1] storing a preassigned direct inward dial telephone number associated with a
11 subscriber;

12 [2] storing a subscriber remote telephone number associated with the subscriber
13 telephone station;

14 [3] receiving an incoming direct inward dial telephone number from a first
15 telephone exchange connection as part of an incoming call attempt from the
16 subscriber telephone station;

17 [4] comparing the incoming direct inward dial telephone number to the
18 preassigned direct inward dial telephone number and if the incoming direct
19 inward dial telephone number matches the preassigned direct inward dial
20 telephone number associated with the subscriber, performing the following steps:

21 [a] [i] calling the subscriber remote telephone number after [ii] the
22 subscriber terminates the call attempt and [iii] connecting to the subscriber
23 telephone station;

24 [b] receiving from the subscriber a calling telephone number for the
25 destination station;

26 [c] calling the calling telephone number through a second telephone
27 exchange connection; and

28 [d] bridging the first telephone exchange connection to the second
telephone exchange connection so that the subscriber is connected to the
destination.

(bracketed numerals and letters added). There is no reason step [1] must be performed before step
[2]. Although it might be difficult to receive a call and then store information necessary to initiate
callback, steps [1], [2], and [3] are not required as a matter of logic or grammar to occur in any
particular order. The comparing of step [4], however, cannot occur until the information from steps

[1] and [2] has been received and the call of step [3] has been received. Step [4] is grammatically and necessarily a condition precedent to the performance of steps [a] through [d].

The "calling" of step [a][i] is recited to occur "after" the "call attempt" termination of step [a][ii]. Logically, the connection "to the subscriber telephone station" in step [a][iii] cannot be made until the subscriber is called in step [a][i]. Because step [b] must occur after step [4], the "connect to the subscriber telephone station" in step [a][iii] must occur before information can be received from the subscriber in step [b]. The "calling telephone number" logically must be received in step [b] before that number can be called in step [c]. The "bridging" of step [d] logically must follow step [c]. This sequence is consistent with the flow charts in the '964 patent, figs. 2-5.

In summary, steps [1], [2], and [3] may occur in any order relative to each other, but all must occur before step [4]. After step [4], steps [a][ii], [a][i], [a][iii], [b], [c] and [d] must occur in that sequence.

3. "Direct inward dial telephone number"

The court previously determined that, in the contexts of the patents-in-suit, "direct inward dial number" means "the last four or five numbers dialed by a subscriber which are passed to the system over a trunk line capable of carrying a direct inward dial number." Order (dkt. # 263²) at 21. Although Cygnus has repeatedly objected to the court's construction of "direct inward dial number," Cygnus's contentions in support of revising that construction are unpersuasive. In summary, the court's previous construction was based on several factors. First, the specification of each patent contains an identical definition of "direct inward dial number":

Accordingly, the present invention advantageously utilizes the Direct Inward Dial (DID) numbers. Under LEC [local exchange company] tariffs it is possible to lease a block, or group, of telephone numbers. The size of the groups may vary between LECs, but a group of one hundred numbers is often a typical group. When these numbers are sequential, they are commonly referred to as blocks, but groups of random numbers are also used.

For purposes of this invention, sequential numbering is not required. The customer leasing the numbers from an exchange does not have to lease a corresponding terminating circuit for each number in the group in order to place a call to each number. Instead, the customer leases local facilities in quantities the customer feels

² Except where otherwise noted, all docket numbers in this order are those of the master docket for MDL 1423.

1 are adequate to handle traffic from the leased numbers. *When a caller dials one of*
2 *the numbers in the group, the central office of the terminating LEC (the LEC that*
3 *assigned the numbers) will complete the call over any of the leased local facilities*
4 *that are available and also pass the last four, sometimes five, numbers that the called*
5 *party dialed. The numbers that are passed are called the Direct Inward Dial, or*
6 *DID, numbers.*

7 '964 patent at 5:63-6:16; '027 patent at 5:66-6:18 (emphasis added). Second, telecom dictionaries
8 dating from 1990 to 2000 describe "direct inward dialing" as a feature of certain phone systems that
9 allowed the phones of a company to be connected so that they could call each other by dialing
10 sequences of fewer than seven digits. Dkt. # 263 at 20. These definitions are consistent with the
11 quoted language of the patent specifications and the inventor apparently contemplated leasing blocks
12 of numbers analogous to a block of numbers used by a large office. Third, during prosecution of
13 both applications, the examiner rejected the claiming of identifying a subscriber via giving him an
14 "assigned number" for calling the service. *Id.* at 25. In response, the patentee limited the claims to
15 identification using DID numbers, which the PTO allowed, so the plaintiff is now estopped from
16 attempting to expand the claims of the patents to identifying a subscriber via assigned numbers other
17 than DID numbers. *Id.*

18 Cygnus now contends that a DID number cannot be four or five digits because one cannot
19 complete a phone call by dialing less than seven digits. However, Cygnus overlooks the
20 specification of the patents-in-suit, which explain that while a subscriber dials a seven or ten digit
21 phone number sufficient to complete a call, the local exchange carrier passes along only "the last
22 four, sometimes five, numbers that the called party dialed," which is enough to determine which
23 number in the rented block of numbers a subscriber called. Cygnus also argues that if a provider
24 rents telephone numbers in different area codes, blocks of non-sequential telephone numbers, or
25 block of more than telephone 100,000 numbers, four or five digits may not provide enough
26 information to reliably distinguish all the rented numbers. Although Cygnus has pointed out
27 potential problems with practicing the invention on a large scale, this does not overcome the
28 definition of "direct inward dial number" provided by the inventor. Although Cygnus identifies Call
Interactive (a company with which Cygnus contracted) planned to have more than 10,000
subscribers, which would have required consideration of at least five digits to distinguish

1 subscribers. Call Interactive's method of operation is not disclosed in the specifications of the
2 patents-in-suit and is not relevant to the construction of the claims.

3 In its previous order, the court ruled that claims covering all methods of identifying a
4 subscriber based just on the number he dialed had been surrendered during prosecution, and that
5 Cygnus was estopped from expanding the claims beyond using any method other than a direct
6 inward dial number to identify a subscriber. Cygnus has not explained why the court's ruling that it
7 is limited by its narrowing argument made during prosecution is incorrect.

8 The court reaffirms its prior order; "direct inward dial telephone number" means "the last
9 four or five numbers dialed by a subscriber which are passed to the system over a trunk line capable
10 of carrying a direct inward dial number."

11 **4. "Telephone communication link"**

12 This term does not need construction.

13 **5. "Telephone exchange"**

14 The term "telephone exchange" is not defined in the specification of the '964 patent.
15 NEWTON'S TELECOM DICTIONARY 846 (16th edition) defines "telephone exchange" as "[a] switching
16 center for connecting and switching phone lines. "Wikipedia³ defines "telephone exchange" as "a
17 system of electronic components that connects telephone calls." Defendants argue that the patent's
18 use of the term is ambiguous because one cannot tell whether "telephone exchange" refers to "the
19 domestic and/or international public telephone network (IXC)" or the "local exchange company
20 (LEC)." See '964 patent, col. 6, ll. 42-43, 45.

21 "Telephone exchange" is mentioned in claim 1 of the '964 patent:

22 first telephone connection means connected to the control means and operable for
23 connecting through a trunk line to the telephone exchange and for receiving an
24 incoming direct inward dial telephone number on the trunk line from the telephone
25 exchange as part of an incoming call attempt from the subscriber telephone station,
26 the incoming direct inward dial telephone number indicating the number called by the
27 subscriber;

28 second telephone connection means connected to the control means and operable for
dialing out through the telephone exchange;

³ http://en.wikipedia.org/wiki/Telephone_exchange

1 *id.*, col. 10, ll. 14-24, as well as in claim 6 of the '964 patent:

2 A method establishing a telephone communication link between a subscriber
3 telephone station and a destination telephone station, both being connected through a
4 telephone exchange,

4 *id.*, col. 10, ll. 62-65.

5 The use of the term "telephone exchange" in the patents fits with the dictionary definitions
6 and nothing suggests that one skilled in the art reading the '964 patent would interpret the term
7 otherwise.

8 Defendants' indefiniteness contention is without merit. "Whether a claim is invalid under 35
9 U.S.C. § 112, ¶ 2, for indefiniteness is a question of law The definiteness inquiry focuses on
10 whether those skilled in the art would understand the scope of the claim when the claim is read in
11 light of the rest of the specification." *Union Pac. Res. Co. v. Chesapeake Energy Corp.*, 236 F.3d
12 684, 692 (Fed. Cir. 2001). The court rejects defendants' contention that the multiple mentions of
13 "telephone exchange" in the '964 patent renders it indefinite. Construing "telephone exchange"
14 (which is not defined in the patent) as "a system of electronic components that connects telephone
15 calls" would allow a single meaning of "telephone exchange" to encompass both the IXC and the
16 LEC. Because 35 U.S.C. § 282 gives a patent "a statutory presumption of validity," a challenger
17 bears the burden of proving "by clear and convincing evidence" that a patent is invalid. *Monsanto*
18 *Co. v. Scruggs*, 459 F.3d 1328, 1336-37 (Fed. Cir. 2006). Defendants have not met this burden.
19 "Telephone exchange" means "a system of electronic components that connects telephone calls."

20 **6. "First telephone connection means"**
21 **"Second telephone connection means"**

22 The parties agree that "first telephone connection means" and "second telephone connection
23 means" are means-plus-function terms under paragraph six of 35 U.S.C. § 112. As the Federal
24 Circuit has explained: "Claim construction of a means-plus-function limitation includes two steps.
25 First, the court must determine the claimed function. Second, the court must identify the
26 corresponding structure in the written description of the patent that performs that function." *Applied*
27 *Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1332 (Fed. Cir. 2006) (citations omitted).
28

1 "Telephone connection means" appears only in claim 1 of the '964 patent. The "telephone
2 connection means" clause reads:

3 first telephone connection means connected to the control means and operable for
4 connecting through a trunk line to the telephone exchange and for receiving an
5 incoming direct inward dial telephone number on the trunk line from the telephone
6 exchange as part of an incoming call attempt from the subscriber telephone station,
7 the incoming direct inward dial telephone number indicating the number called by the
8 subscriber.

9 '964 patent, col. 10, ll. 14-21. The "telephone connection means" thus appears to have two
10 functions, being "operable for connecting" and "receiving."

11 Defendants argue that no structure in the specification corresponds to the "first telephone
12 connection means." 112 Mot. (dkt. # 675) at 10-11. Defendants identify some candidates but
13 discount each in turn:

14 . . . the system obtains the direct inward dial number from storage for placing that
15 number on an output connection to the exchange.

16 . . .

17 CRU **20** includes a computer, controller, or other suitable data processing unit along
18 with appropriate sensing circuit connections as is conventional for data acquisition
19 and control technology.

20 . . .

21 This includes switching functions to handle line (circuit) connections; interactive
22 voice response operations; database controller for subscriber identification; and a
23 system message detail recording (SMDR) unit **24** to provide information necessary to
24 create call records.

25 '964 patent, col. 4, ll. 45-47, col. 6, ll. 48-51, 60-65.

26 Cygnus points to column 5, lines 10 through 24 of the '964 patent as the corresponding
27 structure for "first telephone connection means." This portion of the specification recites that

28 [a] signal is sent from the service center to the originator, thus indicating that the
originator is identified whereupon the originator is instructed or prompted to
terminate the call. Termination by the calling party is sensed at the service center
followed by seizing of a first outbound circuit over which the service center outputs
the call-back number for the identified originator. This operation reconnects the
service center via a voice connection to the originator.

The specification also discusses that the invention relates to a "public telephone network." '964
patent col. 2, ll. 49-50, 59-60. The recitation in the specification of "output connection to the
exchange" is sufficient structure to satisfy the requirements of means-plus-function claiming.

1 Although the drafter could have just called the "telephone connection means" what it appears to be,
 2 namely a phone line, one skilled in the art would recognize a telephone line as the structure
 3 performing the connecting and receiving functions.⁴

4 **7. "First telephone exchange connection"**
 5 **"Second telephone exchange connection"**

6 "Telephone exchange connection" appears only in claim 6 of the '964 patent. The parties
 7 generally agree that "telephone exchange connection" should be construed in the same manner as
 8 "telephone connection means." "Telephone exchange connection" means "telephone line."

9 Defendants argue that the way "first telephone exchange connection" is used in claim 6
 10 renders the claim fatally indefinite and not enabled.⁵ Claim 6 of the '964 patent is

11 A method establishing a telephone communication link between a subscriber
 12 telephone station and a destination telephone station, both being connected through a
 13 telephone exchange, comprising the steps of:

14 [1] storing a preassigned direct inward dial telephone number associated with a
 15 subscriber;

16 [2] storing a subscriber remote telephone number associated with the subscriber
 17 telephone station;

18 [3] receiving an incoming direct inward dial telephone number from a *first*
 19 *telephone exchange connection* as part of an incoming call attempt from the
 20 subscriber telephone station;

21 [4] comparing the incoming direct inward dial telephone number to the
 22 preassigned direct inward dial telephone number and if the incoming direct
 23 inward dial telephone number matches the preassigned direct inward dial
 24 telephone number associated with the subscriber, performing the following steps:

25 [a] [i] calling the subscriber remote telephone number after [ii] the
 26 subscriber terminates the call attempt and [iii] connecting to the subscriber
 27 telephone station;

28 [b] receiving from the subscriber a calling telephone number for the
 destination station;

⁴ Defendants also argue that disclosure of the details of James Alleman's "386 System" in the specification would have been necessary to satisfy the written description requirement as to "second telephone connection means." Disputed issues of material fact prevent resolution of this issue.

⁵ Defendants also argue that claim 6 of the '964 patent is invalid for failing to satisfy the written description requirement. This argument is duplicative of their arguments that claim 6 is indefinite and not enabled. *See* 112 Mot. (dkt. # 675) at 13-14.

1 [c] calling the calling telephone number through a *second telephone*
2 *exchange connection*; and

3 [d] bridging the *first telephone exchange connection* to the *second*
4 *telephone exchange connection* so that the subscriber is connected to the
5 destination.

6 (emphasis and bracketed numerals and letters added). As defendants read claim 6, the subscriber
7 makes calls in via the "first telephone exchange connection" in step [3], the connection via the "first
8 telephone exchange connection" is terminated in step [4][a][ii] and no subsequent connection via the
9 "first telephone exchange connection" is explicitly made and yet in step [4][d], the "first telephone
10 exchange connection" and "second telephone exchange connection" are bridged. The absence of a
11 step connecting to the "first telephone exchange connection" after the termination in step [4][a][ii]
12 makes performance of step [4][d] impossible and, therefore, in defendants' view, the claim is
13 inoperable since the connection made in step [3] was terminated in step [4][a][ii].

14 Although the claim does not specifically refer in steps [4][a][i], [a][iii] and [b] to
15 reconnecting or remaking a "first telephone exchange connection," those steps combined with step
16 [4][d] necessarily would tell someone skilled in the art that what is referred to in step [4][d] as the
17 "first telephone exchange connection" is the connection referred to in steps [4] [a][i] and [ii].
18 Therefore, claim 6 is not indefinite and is enabled.

19 **8. "Subscriber telephone station"**

20 Cygnus wishes a broad construction of "subscriber telephone station" that would cover any
21 method of making phone calls, including personal computers. The defendants advocate a very
22 narrow construction that would limit the phrase to the telephone handset associated with the
23 telephone number associated with the subscriber. Although in the preferred embodiment, the
24 subscriber is "connected to the system via a telephone handset," '964 patent, col. 6, ll. 40-41, there is
25 nothing else in the patent that suggests "subscriber telephone station" should only be a telephone
26 handset. The court therefore construes "subscriber telephone station" as "a device that allows audio
27 communication over a telephone network."
28

1 **9. "Dialing"**
 "Calling"

2 Cygnus advocates a broad construction of "dialing" and "calling," while defendants seek a
 3 narrow interpretation. Specifically, defendants wish to limit dialing or calling to the use of DTMF
 4 tones (which the defendants describe as "touch tones") and exclude alternative technologies. Again,
 5 the description of the preferred embodiment is the only source of language that supports defendants'
 6 position: "The call-back number is then outpulsed by the DTMF recognition and dialing unit"
 7 '964 patent, col. 7, ll. 40-42. Defendants' proposed limitation based on the preferred embodiment is
 8 not warranted, and no further construction of "dialing" or "calling" is therefore necessary.

9 **10. "Trunk line"**

10 Cygnus argues that "trunk line" needs no construction because the term is not "an element of
 11 the patented combination." The term, however, appears twice in claim 1 of the '964 patent in
 12 connection with the description of the "first telephone connection means":

13 first telephone connection means connected to the control means and operable for
 14 connecting through a trunk line to the telephone exchange and for receiving an
 15 incoming direct inward dial telephone number on the trunk line from the telephone
 16 exchange as part of an incoming call attempt from the subscriber telephone station,
 the incoming direct inward dial telephone number indicating the number called by the
 subscriber;

17 '964 patent, col. 10, ll. 14-19. In light of the court's construction of DID number, defendants
 18 correctly contend that "trunk line" is limited to a phone line specially configured to pass a DID
 19 number along with a call. The first telephone connection means must be able to "receiv[e] an
 20 incoming direct inward dial telephone number."

21 **11. "Service center"**

22 "Service center" appears several times in claim 1 of the '027 patent, which covers

23 a *service center* having a direct inward dial number assigned to each subscriber and
 24 an assigned call-back number recorded for each subscriber, a sensor for receiving the
 25 direct inward dial signal sent by the subscriber to the *service center*, a first outbound
 26 circuit from the *service center* over which the center dials the callback number of the
 27 subscriber when the direct inward dial number is triggered and on which the
 28 subscriber enters the number of the called party, a second outbound circuit from the
 service center over which the center dials the number entered by the subscriber on the
 first circuit to reach the called party, and an automatic bridging device for bridging
 the subscriber on the first circuit to the called party on the second circuit, whereby the

subscriber is telephonically linked to the called party without human intervention at the *service center*.

'027 patent, col. 10, ll. 7-22 (emphasis added).

The '027 specification contains the following description⁶ of the service center:

A central location service center is established at which a call-back telephone number is provided for each subscribing call originator. A number is assigned for use for all calls that are placed by that originator. This assigned number is used to call the service center whereupon the originator is identified by the service center.

A signal is sent from the *service center* to the originator, thus indicating that the originator is identified whereupon the originator is instructed or prompted to terminate the call. Termination by the calling party is sensed at the *service center* followed by seizing of a first outbound circuit over which the *service center* outputs the call-back number for the identified originator. This operation reconnects the *service center* via a voice connection to the originator.

The originator is prompted to input the telephone number of the called party the originator intends to call. A second outbound circuit is seized at the *service center* whereupon the called party number is outputted to this second outbound circuit. Finally, the originator is bridged to the second outbound circuit thus connecting the originator with the called party.

The process, or system apparatus, in accordance with this invention, is preferably contained at a central location or service center. Since it is essentially self-contained for its purpose and requires a minimal number of lines connecting it to an exchange, the present invention is adaptable for relatively easy relocation to interface with the most economic tariff rate location wherever that might physically present itself throughout the world.

'027 patent, col. 3, ll. 33-62 (emphasis added). The paragraphs that follow describe the function of the "central location":

The process and apparatus of this invention interactively establishes communication links between a calling party and one or more parties called by that calling party. It employs input and output connections to a telephone exchange that provides interface switching of the calling party with the *central location*. A signal is generated containing data uniquely identifying the originating station of the calling party which signal is placed on the input connection to the *central location* whenever the calling party places a call to that input connection from their station.

The *central location* stores the unique identifying data of one or more authorized calling party subscribers. A signal on the *central station* input connection attempting to establish communications between the exchange and the central location causes the system to compare the data of the identifying signal associated with the connection attempt with the contents in the data storage.

⁶ The '964 specification contains the same description, but the phrase "service center" does not appear in the claims of the '964 patent.

1 In response to a favorable comparison, a cali⁷ is originated from this *central*
2 *location* to the calling party station. Signals are then received from the calling party
3 station for identifying a called party station with which the calling party desires to
4 establish a communication connection. That is, these calling party originated signals
5 identify a third party station. The *central location* finally bridges a communication
6 connection between the calling party station and the third party station.

7 Preferably, the present invention responds to a favorable identification
8 comparison as mentioned above by returning an audible signal to the calling party.
9 This indicates the favorable comparison result so that the calling party will know to
10 terminate the call attempt so as to allow the *central location* to originate a call to the
11 call originating station. Failure of the calling party to terminate the call attempt a
12 predetermined period of time after the recognition signal is given or from the time of
13 commencement of an attempt to establish a connection from the calling party station
14 terminates further processing of the connection attempt at the *central location*.

15 Connection attempt termination, because of the time-out function or a failure
16 to produce a favorable comparison, can trigger a process which results in temporarily
17 establishing a communication connection with the calling party station for presenting
18 an audio message thereto. The *central location* typically will disconnect from the
19 calling station after completion of an audio message.

20 The present invention is particularly well suited for advantageously utilizing
21 the calling party identifying data in the form of the contemporary direct inward dial
22 number produced by the exchange. Thus, the *central location* stores in a memory the
23 direct inward dial number for each calling party authorized to utilize the system.
24 Following a favorable comparison of the calling party number with a stored number,
25 the system obtains the direct inward dial number from storage for placing that
26 number on an output connection to the exchange.

27 A failure of the called party to answer the call attempt from the *central*
28 *location* can result in provision of an indication to the calling party that they can
select between terminating connection attempts or attempting to establish a
connection with another third party. The invention can accommodate establishment
of a multiple party conference call in response to calling parties instructions to the
central location.

The system is likewise well suited for receiving and collecting management
and billing information on calls established by the system. This enables a
determination of the extent of use of the system by authorized and/or unauthorized
calling parties. After establishing a communication connection with the calling party
station, the *central location* can respond to a special signal originated from the calling
party station so as to terminate further communication and communication attempts

⁷ Presumably, this is a typographical error and should instead be "call," as it is in the '964 patent.
See '964 patent, col. 4, l. 10.

1 with the calling party station. This invention can utilize a dual tone multi-frequency
2 signal as the above mentioned special signal from said calling party station.

3 '027 patent, col. 3, l. 63-col. 5, l. 4. The inventor then switched back to describing the "service
4 center":

5 The method and apparatus of this invention provides an economical telephone
6 service by employing the most advantageous tariff between all originator and one or
7 more called parties. A *service center* is established at which a call-back telephone
8 number is provided for each originator, and at which a number is assigned for use for
9 all calls that are placed by that originator. The assigned number is used to call the
10 *service center* whereupon the originator is identified by the *service center*.

11 A signal is sent from the *service center* to the originator thus indicating that the
12 originator is identified whereupon the originator is instructed to terminate the call.
13 Sensing originator call attempt termination, the *service center* responds by seizing a
14 first outbound circuit over which the *service center* outputs the call-back number for
15 the identified originator thereby reconnecting the *service center* to the originator.

16 The originator is prompted to input the telephone number of the called party the
17 originator intends to call. A second outbound circuit is seized at the *service center*
18 whereupon the called party number is outputted to the second outbound circuit.
19 Bridging the originator to the second outbound circuit thus connects the originator
20 with the called party.

21 '027 patent, col. 5, ll. 4-27.

22 From this, it appears the inventor used "service center" and "central location"
23 interchangeably. Defendants argue that "service center" means "a single location housing the
24 service center master system which has: (a) a computer or switch including integrated components
25 for performing switching functions to handle circuit connections, including a circuit connection to
26 receive DID service from the LEC central office, (b) the database controller, (c) the DTMF
27 generator, (d) the bridging function, and (e) the subscriber table server (the database)." Cygnus
28 argues that "service center" "certainly does not mean 'a single location housing' particular
equipment" because "it is commonplace for international call-back providers to have equipment and
personnel at more than one location." Regardless of what the standard industry practice may now
be, the patent itself shows that the inventor clearly preferred that the process or system apparatus of
the invention be located at a "central location" ("service center") and adaptable for easy relocation to
interface with the most economic tariff rate location wherever that was physically located.
Therefore, although the inventor may have contemplated the possibility of having the system

1 equipment located at more than one place despite his preference for a central location, by use of the
 2 term "service center" in claim 1 of the '027 patent the inventor is referring to a "central location"
 3 rather than a series of separate locations. "Service center" means the central location at which the
 4 system apparatus carries out the process of the invention.

5 **12. "Enters"**

6 Defendants argue that "enters" means "inputting the DTMF digits of the called party number
 7 by the subscriber using the keypad of the telephone handset," while Cygnus argues that "enters"
 8 means "dials" or "calls." "Enters" appears in claims 1, 6, and 11 of the '027 patent as part of the
 9 phrase "the subscriber enters the [telephone] number of the called party." "Enters" appears in the
 10 specification once, in the description of the preferred embodiment: "When the subscriber enters a
 11 called party number, CRU 20 seizes a second outbound circuit 25. DTMF Generator 26 recognizes
 12 the called party number DTMF digits entered by the subscriber and outpulses those digits over the
 13 second seized circuit." '027 patent, col. 7, ll. 50-54. While in the preferred embodiment, the "called
 14 party number" is clearly sent by the subscriber as "DTMF digits," the claim is not so restricted.
 15 "Enters" means "dials."

16 **13. "Triggered"**

17 Cygnus asserts that in the '964 patent, "triggered" is used in the ordinary English sense of
 18 initiated or precipitated. Defendants admit that "[t]he term 'triggered' is not defined in the
 19 specification" but argue that "triggered" should be limited to "(a) a matching of the incoming direct
 20 inward dial number (DID) with the assigned/stored DID number and (b) the subscriber hanging up."
 21 Defendants overlook that the specification uses "trigger" in another context in a manner consistent
 22 with Cygnus's interpretation and inconsistent with their own:

23 Connection attempt termination, because of the time-out function or a failure to
 24 produce a favorable comparison, can trigger a process which results in temporarily
 25 establishing a communication connection with the calling party station for presenting
 an audio message thereto. The central location typically will disconnect from the
 calling station after completion of an audio message.

26 '027 patent, col. 4, ll. 35-41. "Triggered" therefore merely means "initiated or precipitated."

27 Defendants argue that claim 1 of the '027 patent is invalid because the term "triggered" is
 28 indefinite, not enabled, and no written description in the specification supports claim 1's use of the

term. 112 Mot. (dkt. # 675) at 17. The portion of claim 1 with which defendants take issue reads: "a first outbound circuit from the service center over which the center dials the callback number of the subscriber when the direct inward dial number is triggered and on which the subscriber enters the number of the called party." '027 patent, col. 10, ll. 11-15. However, given the constructions of "triggered" and "DID number," claim 1 is not indefinite and provides that "the center dials the callback number of the subscriber when the" DID number is initiated, *i.e.*, sent by the terminating LEC. Defendants' motion for summary judgment that the use of "triggered" renders claim 1 of the '027 patent invalid under § 112 is denied.

14. "Sensor"

The parties do not seek construction of the term "sensor." However, defendants argue that no written description supports "sensor" as used in claim 1 of the '027 patent. 112 Mot. (dkt. # 675) at 17. According to defendants, the phrase "a sensor for receiving the direct inward dial signal sent by the subscriber to the service center," '027 patent, col. 10, ll 10-11, means that the DID number is sent by the subscriber, but this is inconsistent with the patentee's definition of DID number, which requires DID numbers to be passed on by "the terminating LEC," *id.*, col. 6, ll. 13-14. Although not as carefully drafted as it could have been, since a DID number is the end portion of a phone number initially dialed by the subscriber, the DID number can properly be said to have been "sent by the subscriber to the service center" and recognized or sensed. Defendants' motion for summary judgment that the use of "sensor" renders claim 1 of the '027 patent invalid under § 112 is denied.

15. "Control means"

Claim 1 of the '964 patent includes

control means operable for managing a database of caller information;

...

the control means further operable for comparing the incoming direct inward dial telephone number to the preassigned direct inward dial telephone number and, if the incoming direct inward dial telephone number matches the preassigned direct inward dial telephone number associated with the subscriber, the control means is further operable for:

calling the subscriber remote telephone number through the first telephone connection means after the subscriber terminates the incoming call attempt and connecting to the subscriber telephone station;

1 receiving from the subscriber a calling telephone number for the destination
station;

2 calling the calling telephone number through the second telephone connection
3 means; and for

4 bridging the first telephone connection means to the second telephone connection
5 means so that the subscriber is connected to the destination.

6 '964 patent, col. 10, ll. 6-7, 25-42. The parties agree that the interpretation of "control means" is a
7 means-plus-function limitation governed by 35 U.S.C. § 112 ¶ 6. The parties also agree that the
8 "control means" has eight functions (managing a data base, comparing, calling the subscriber,
9 connecting to the subscriber station, receiving, calling the destination, connecting to the destination,
10 and bridging). However, defendants contend that nothing links the "control means" to any structure
11 in the specification of the patent. Cygnus responds that defendants'

12 argument is nonsense, since the whole purpose of § 112 ¶ 6 claim language is that the
13 functions need *not* be linked to 'specific structures.' Any structure that is equivalent
to the structure described in the specification may be used, so long as the specified
function is performed. Defendants are simply wrong as a matter of law.

14 Pl.'s Claim Constr. Br. (dkt. # 684) at 6.⁸ However, as the Federal Circuit has stated, "[a] structure
15 disclosed in the specification qualifies as corresponding structure only if the specification or
16 prosecution history clearly links or associates that structure to the function recited in the claim."
17 *Default Proof Credit Card Sys. v. Home Depot U.S.A.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005)
18 (quotation marks omitted). Despite its apparent mistaken belief that it does not need to link the
19 "control means" to any structure in the specification, Cygnus offers a portion of the first sentence of
20 the summary of the invention as the structure corresponding to the "control means": "an automated
21 call processing system that incorporates an audio response unit and computer." '964 patent, col. 2,
22 ll. 50-51. The full sentence this phrase is taken from states "[t]his invention, in cooperation with a
23 public telephone network, provides an automated call processing system that incorporates an audio
24 response unit and computer in a system arrangement for enabling a subscriber to initiate telephone
25 calls whose network identified point-of-origin is a physical site other than the physical location of
26 the subscriber." *Id.*, ll. 49-55.

27 ⁸ Cygnus also argued that "'[c]ontrol means' is a means for controlling, and need not be construed."
28 Claim Constr. Reply Br. (dkt. # 721) at 13.

1 Cygnus's expert opines that

2 The '964 patent at **3:3-6** shows that a personal computer with a switch software
3 program may be used to identify the subscriber, look up the call-back number, call
4 the subscriber and destination and bridge the two calls. Control means should be
construed to mean a computer and storage device with appropriate software to
perform the eight functions specified in the claim.

5 Am. Forys Expert Report Claims Constr. (dkt. # 643) at 13. The cited section of the specification
6 provides "[w]hen a subscriber uses an assigned telephone number to establish a call to this service,
7 the system will identify the subscriber by using a personal computer or switch software program."
8 This sentence links the "comparing" function to the structure of "a personal computer or switch
9 software program." The specification in the section entitled "Detailed Description of the Preferred
10 Embodiment" identifies the call response unit ("CRU") which is item 20 in figure 2 as including a
11 computer or switch and consisting of integrated components that permit the system to perform a
12 number of functions integral to the invention. '964 patent, col. 6, ll. 46-66. Figure 2 and additional
13 discussion of the preferred embodiment in the specification show that the computer in the CRU
14 performs the functions of the "control means." The purported inventive aspect of the '964 patent is
15 the combination of functions that result in a telephone switching system that saves telephone tariffs,
16 not the programs that allow the computer to perform the functions. One ordinarily skilled in the art
17 could perform the individual functions with existing technology. The linkage of the functions of the
18 "control means" to a computer or its equivalent adequately meets the requirements of § 112 ¶ 6.

19 **16. "Automatic bridging device"**

20 Defendants argue that the term "automatic bridging device" as used in claim 1 of the '027
21 patent is a means-plus-function limitation and that the specification fails to recite sufficient structure
22 to perform the automatic bridging function. According to claim 1, the function of the "automatic
23 bridging device" is to "bridg[e] the subscriber on the first circuit to the called party on the second
24 circuit, whereby the subscriber is telephonically linked to the called party without human
25 intervention at the service center." '027 patent, col. 10, ll. 40-42. Cygnus claims that "automatic
26 bridging device" needs no construction and offers expert opinion in support of its position:

27 The Defendants claims [sic] that this term is a means plus function limitation. It
28 appears to me that the claim describes a component in a system. It describes a
structure. One of ordinary skill in the art would understand what an automatic

bridging device is. There are several examples of such structures in the industry e.g. a dial in bridge service offered by organizations such as AT&T. The mere act of dialing in causes bridging.

Am. Forys Expert Report Claims Constr. (dkt. # 643) at 26.⁹ In addition, Cygnus claims that two of its witnesses gave examples of automatic bridging devices. Thomas Thompson testified that Call Interactive used a "telecommunications switch" called the "AT&T Dimension," although he did not specifically state whether "AT&T Dimension" corresponded to the "automatic bridging device" of the '027 patent. *See* Thompson Decl. at 108-09.¹⁰ James Alleman, the named inventor, explained:

[Q.] Was the 386 system capable of doing that bridging after the person that was being called picked up on the line?

A. I don't believe—I don't know. I don't know that we've—I believe that the bridge prior to, it could have, but we certainly didn't attempt to experiment with that, to the best of my recollection.

Q. Did you have any specific hardware that accomplished the bridging function in the 386 system?

A. Yes. It was from Dialogic, as I had mentioned earlier.

Q. It was one of the Dialogic boards?

A. I believe it truly bridged the two. They were called DX 4 Dialogic boards, and it really, if you think about a computer system, where there's empty slots, the DX 4 board would fit in one slot, and another DX 4 would fit in another slot, just as a second hard drive or serial port would fit in. And to the best of my recollection, the bridge actually fitted on top of those two DX 4 boards. So it didn't have a separate slot of its own in the computer, but it fit on top.

Q. Okay.

Alleman Depo. at 121.¹¹

Defendants argue "automatic bridging device" is a means-plus-function limitation and that it is fatally indefinite. Defendants point to two portions of the description of the preferred embodiment which they claim are inconsistent. First, "DTMF Generator 26 recognizes the called

⁹ The court strikes Forys's opinion on whether "automatic bridging device" is a means-plus-function limitation as without foundation and invading the province of the court.

¹⁰ Excerpts of the September 20, 2006 deposition of Thomas Thompson, including pages 108 and 109, are attached as Exhibit 297 to the declaration John Sutton (dkt. # 685).

¹¹ Excerpts of the September 20, 2006 deposition of James Alleman, including page 121, are attached as Exhibit 298 to the declaration John Sutton (dkt. # 685).

party number DTMF digits entered by the subscriber and outpulses those digits over the second seized circuit. DTMF generator **26** activates bridging function **29** to bridge the subscriber onto the second outbound circuit." '027 patent, col. 7, ll. 54-57. Second, "When a second outbound circuit is seized, as described at **62** in FIG. 4, CRU **20** outpulses the called party number at **70**, and bridges the subscriber onto the second outbound circuit to monitor call progress tones at **71**." *Id.*, col. 9, ll. 28-31. The patent appears to recite in different places that bridging is performed by different components, either the "DTMF generator **26** activat[ing] bridging function **29**" or the "CRU **20**." However, it is not clear from the '027 patent whether the components along the right edge of Figure 1 are intended to be subparts of the "CRU **20**" or whether they are distinct from it. In places, the specification treats them as distinct. *See, e.g.*, '027 patent, col. 7, ll. 25-28 ("At the same time the CRU **20** delivers the DID digits to the subscriber table server **21**, it also delivers call detail information to the system message detail recording database (SMDR) **24**."). In another portion, however, it would appear that at least some of these right-side components are subparts of "CRU **20**":

CRU **20** is a computer, or switch, that is connected to the LEC **15** central office and consisting of integrated components that permit the system to perform a number of functions integral to this invention. This includes switching functions to handle line (circuit) connections; interactive voice response operations; database controller for subscriber identification; and a system message detail recording (SMDR) unit **24** to provide information necessary to create call records.

'027 patent, col. 6, ll. 59-67.

When a claim limitation does not contain the word "means," the limitation is "presumptively not a means-plus-function limitation." *Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1355 (Fed. Cir. 2006). "However, a limitation lacking the term 'means' may overcome the presumption against means-plus-function treatment if it is shown that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function." *Id.* at 1353 (some quotation marks omitted). "The generic term[] 'device[]' typically do[es] not connote sufficiently definite structure" to avoid treatment as a means-plus-function limitation. *Id.* at 1354. The Federal Circuit has contrasted a pair of examples:

Claim language that further defines a generic term like "mechanism" can sometimes add sufficient structure to avoid 112 ¶ 6. For example, in *Greenberg v.*

Ethicon Endo-Surgery, Inc., 91 F.3d 1580 (Fed. Cir. 1996), which involved a mechanical device, we held that 112 ¶ 6 did not apply to the term "detent mechanism," because "the noun 'detent' denotes a type of device with a generally understood meaning in the mechanical arts, even though the definitions are expressed in functional terms." *Id.* at 1583. The court recited several dictionary definitions for "detent," including "a mechanism that temporarily keeps one part in a certain position relative to that of another, and can be released by applying force to one of the parts." *Id.* (internal quotation marks and citations omitted). These definitions connoted sufficient structure to avoid 112 ¶ 6. We also concluded that "the fact that a particular mechanism—here 'detent mechanism'—is defined in functional terms is not sufficient to convert a claim element containing that term into a 'means for performing a specified function' within the meaning of 112 ¶ 6" because "many devices take their names from the functions they perform." *Id.*¹²

In contrast, the term "colorant selection," which modifies "mechanism" here, is not defined in the specification and has no dictionary definition, and there is no suggestion that it has a generally understood meaning in the art. We therefore agree with the district court that "colorant selection mechanism" does not connote sufficient structure to a person of ordinary skill in the art to avoid 112 ¶ 6 treatment."¹³

Mass. Inst. of Tech., 462 F.3d at 1354 (original bracket removed; footnotes renumbered).

Here, "automatic bridging device" is defined in the claim by function as was "detent mechanism" in *Greenberg*. In addition, Cygnus's expert Forys declared that one skilled in the art would know what an "automatic bridging device" is and indicated that AT&T offered one. Finally, the testimony of Alleman and Thompson offers some support to Forys' opinion that one skilled in the art would know what an "automatic bridging device" was. Therefore, the court concludes that "automatic bridging device" is not a means-plus-function limitation but rather a limitation that suggests sufficient structure to one ordinarily skilled in the art to avoid the application of 112 ¶ 6.

¹² Of course, a claim term defined solely in functional terms, without more, would fall within Section 112(6). *See Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1318 (Fed. Cir. 1999); *see also Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

¹³ In *Lighting World[, Inc. v. Birchwood Lighting, Inc.]*, we held that it was appropriate to look to dictionaries "to determine if a disputed term has achieved recognition as a noun denoting structure," and determined that "connector" had a reasonably well-understood meaning as a name for a structure. 382 F.3d [1354,]1360-61[(Fed. Cir. 2004)]. That structure was defined in terms of the function it performed, "connecting." *Id.* Here, the term "mechanism" is not defined by a function that particularizes its structure.

II. BEST MODE

Defendants set forth the general standard of the best mode requirement, *see* 112 Mot. (dkt. # 675) at 4-5, but do not thereafter present any specific argument that the '964 and '027 patents fail to satisfy the best mode requirement. Defendants' motion, such as it is, that the patents-in-suit are invalid for failure to disclose the best mode is denied.

III. ON-SALE BAR

A. Statutory On-Sale Bar

By statute, "[a] person shall be entitled to a patent unless . . . the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." 35 U.S.C. § 102(b). The Federal Circuit has explained the on-sale bar:

In *Pfaff v. Wells Electronics, Inc.*, the Supreme Court held that a patent claim is invalid under the on-sale bar if two conditions are met: first, the invention must have been the subject of a commercial offer for sale more than one year before the patent application was filed; second, the invention must have been ready for patenting more than one year before the filing of the application. Reduction of the invention to practice is sufficient to satisfy the second condition.

Zacharin v. United States, 213 F.3d 1366, 1369 (Fed. Cir. 2000) (citation omitted). On April 24, 1992, Alleman filed the parent of the applications that eventually gave rise to the two patents-in-suit. '964 patent, ¶ [63]; '027 patent, ¶ [63]. Sale of, or offers to sell, the invention of the patents-in-suit before April 24, 1991 (the so-called "critical date") invalidate them.

B. Ready for Patenting

In 1988, James Alleman founded Paragon Services International, Inc. By 1990, Paragon was providing long-distance phone service using what the parties refer to as the "black box system." This system required two phone lines for each user, as well as the "black box," which would receive a user's phone call on one line, place an outgoing call on the other, and bridge the two calls. The need for two lines and a black box per user made the black box system somewhat expensive. In 1990, Alleman developed what the parties refer to as the "386 system" and transferred Paragon's existing users over to it from the black box system.

1 During prosecution of the '027 patent, Alleman stated to the PTO: "I reduced to practice the
 2 invention of the claims before June 27, 1990" as part of an attempt to swear behind prior art cited by
 3 the examiner. Wood Decl. (dkt. # 681), Ex. 7 (Feb. 11, 1997 Alleman Decl.) ¶¶ 3, 6. Alleman now
 4 seeks to distance himself from his 1997 declaration. In a November 2, 2006 declaration, Alleman
 5 states:

6 I did not know what the legal term "reduced to practice" meant on March 11, 1997.
 7 The term was drafted by counsel for Cygnus who was not familiar with the
 8 prosecution of the earlier patent applications It made no difference, as it turned
 9 out, because the references relied upon by the examiner in the parent case were all
 10 overcome in the Board of Appeals decision in 1998, which had nothing to do with the
 11 difference between June 1990 and April 1991. It was harmless error.

12 Alleman Decl. (dkt. # 700) ¶ 18.

13 "A party cannot create an issue of fact by supplying an affidavit contradicting his prior
 14 deposition testimony, without explaining the contradiction or attempting to resolve the disparity."
 15 *Sinskey v. Pharmacia Ophthalmics*, 982 F.2d 494, 498 (Fed. Cir. 1992), *abrogated in part on other*
 16 *grounds, Pfaff v. Wells Elecs.*, 525 U.S. 55, 67-68 (1998); *see also Kennedy v. Allied Mut. Ins. Co.*,
 17 952 F.2d 262, 266-67 (9th Cir. 1991). A court should consider an explanation by the declarant as to
 18 why he later seeks to change his earlier sworn testimony. *Cleveland v. Policy Mgmt. Sys. Corp.*, 526
 19 U.S. 795, 807 (1999). Here, there is no satisfactory explanation.

20 Alleman cannot blame the attorney who drafted the declaration for the mistake. A party is
 21 "bound by the actions of its attorney." *Navajo Tribe of Indians v. United States*, 601 F.2d 536, 539
 22 (Ct. Cl. 1979). Patent applications are *ex parte* proceedings which have substantial effect upon the
 23 rights of the public, and as such, Alleman and "counsel for Cygnus" had a duty to ensure filings
 24 were accurate.

25 A patent by its very nature is affected with a public interest. The public interest is
 26 best served, and the most effective patent examination occurs when, at the time an
 27 application is being examined, the Office is aware of and evaluates the teachings of
 28 all information material to patentability. Each individual associated with the filing
 and prosecution of a patent application has a duty of candor and good faith in dealing
 with the Office, which includes a duty to disclose to the Office all information known
 to that individual to be material to patentability as defined in this section.

37 C.F.R. § 1.56(a). Alleman's 1997 declaration was made at the time for reasons substantially
 affecting patentability and under penalty of perjury. It cannot now be disavowed because Alleman

1 allegedly did not know in 1997 what the legal term "reduction to practice" meant and because it
 2 turned out to be "harmless error." Alleman's subsequent explanation is, in these circumstances,
 3 insufficient to justify ignoring the 1997 declaration and considering his contrary 2006 declaration.
 4 Further, and perhaps more importantly, the evidence suggests that Alleman's 1997 declaration is
 5 accurate. The 386 system embodied the invention of the patents-in-suit. Alleman explained how the
 6 invention worked and how it satisfied the claim limitations of the application that became the '027
 7 patent. Wood Decl., Ex. 7 (Feb. 11, 1997 Alleman Decl.) (dkt. # 683) ¶¶ 8-26. The invention was
 8 reduced to practice "before June 27, 1990" and thus ready for patenting before the critical date of
 9 April 24, 1991.

10 Cygnus, however, currently argues that the 386 System was experimental because (1)
 11 Alleman says it was experimental, and (2) each user only had to pay for whatever telephone charges
 12 his use of the system generated. Alleman's opinion that the 386 System was experimental before the
 13 critical date is contrary to the rule that reduction to practice cuts off access to the experimental use
 14 exception.¹⁴ "[O]nce an invention has been reduced to practice, it can no longer meet the
 15 experimental use exception." *Zacharin v. United States*, 213 F.3d 1366, 1369 (Fed. Cir. 2000).
 16 Nevertheless, Cygnus argues at great length that the fact that the invention was not "commercially
 17 scalable" until April 25, 1991 indicates that all activity prior to that date was experimental. As
 18 commercial scalability is not a limitation of any claim, its absence is not relevant to the § 102(b)
 19 analysis. *See STX, LLC v. Brine, Inc.*, 211 F.3d 588, 590-91 (Fed. Cir. 2000). In fact, the claims at
 20 issue all refer to "the subscriber" and "a subscriber."

21 As the invention of the '027 patent was reduced to practice many months before the critical
 22 date, the second prong of *Pfaff* is met here.

23
 24
 25 ¹⁴ Defendants' motion to strike portions of Alleman's November 2, 2006 declaration under Fed. R.
 26 Evid. 701 as inadmissible legal opinions is granted. Similarly, defendants' motions to strike portions
 27 of Alleman's November 2, 2006 declaration under Fed. R. Evid. 602, 704, 802 are granted.
 28 Defendants' motion to strike under Fed. R. Evid. 402 is largely premised on the assumption that only
 the 386 System is relevant to the issues at hand. As it is not clear that the other matters about which
 Alleman testifies are irrelevant to the issues at hand, defendants' motion to strike under Fed. R.
 Evid. 402 is denied.

1 **C. Offer for Sale**

2 Alleman admits that while his 386 System was running in 1990, he charged users of the
3 system for the costs of the calls that they made. Wood Decl. (dkt. # 681), Ex. 2 at 8-15 (Mar. 8,
4 2001 Alleman Depo. at 48, 64, 137-39). Cygnus argues that because Alleman made no profit from
5 these transactions, they do not constitute a "sale" for purposes of § 102(b).

6 Whether a transaction generates a profit is not determinative of whether it constitutes a sale
7 under § 102(b). *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1381 (Fed. Cir. 1998). In *Zacharin*
8 *v. United States*, the Federal Circuit stated that "[a] contract to supply goods is a sales contract,
9 regardless of the means used to calculate payment and regardless of whether the goods are to be
10 used for testing in a laboratory or for deployment in the field." 213 F.3d at 1370. While Alleman
11 provided services rather than goods, that is not a sound basis to distinguish *Zacharin*. Under the
12 logic of *Zacharin*, payment constitutes a sale "regardless of the means used to calculate payment,"
13 and although Alleman may have only been charging his costs to the users, providing services in
14 exchange for payment constitutes a sale. "A patent owner may have created an on-sale bar despite
15 *losing money on a sale.*" *U.S. Environmental Products Inc. V. Westall*, 911 F.2d 713, 717 (Fed. Cir.
16 1990).

17 Cygnus argues that the individuals who used his system prior to the critical date and paid his
18 telephone charges were doing so for experimental purposes. However, Alleman's reduction to
19 practice before June 27, 1990 cut off the ability to claim any experimental use. *See Zacharin*, 213
20 F.3d at 1369. However, even if Alleman's admission of reduction to practice before June 27, 1990,
21 is ignored, Alleman further declared:

22 Before June 27, 1990, I had built a system that confirmed that my ideas would work.
23 . . . However in order to make the invention compatible with telephone equipment, I
needed software to implement the steps and system of my invention.

24 * * *

25 23. The software I asked Mr. Gunther to prepare for me was completed by
26 September, 1990. I was then in position to find a vendor for preparing a complete
27 system for my invention, and marketing the invention to the public. To that end, I
28 contacted a joint venture called "Call Interactive." The joint venturers were AT&T,
long known for expertise in making telephone service and hardware, and American
Express, long known for its marketing expertise. On October 15, 1990, I entered into
a confidential disclosure agreement with Call Interactive regarding implementing and
marketing my invention

24. After receiving the disclosure in confidence of my invention, Call Interactive successfully completed the installation and development plans for introducing the invention, and set the date of April 25, 1991, as the date of product introduction.

Wood Decl. (dkt. # 681), Ex. 7 at ¶¶ 6, 23-25. Alleman, therefore, had clearly entered into a contract for the marketing and sale of the alleged invention prior to the critical date. A "sale" occurs when the parties offer or agree to reach a contract to give and pass rights of property for consideration. *See Special Devices, Inc. v. OEA, Inc.*, 270 F.3d 1353, 1355-57 (Fed. Cir. 2001). The fact that Call Interactive's commercial use was kept secret until such time as marketing to the public was announced is irrelevant because either public use¹⁵ or a sale prior to the critical date precludes the ability to patent an invention. *See Woodland Trust v. Flowertree Nursery, Inc.* 148 F.3d 1368, 1370-71 (Fed. Cir. 1998). Similarly, the fact that Call Interactive did not intend to begin public marketing until one day after the critical date does not preclude the statutory bar. *See Pfaff*, 525 U.S. at 67; *STX, LLC v. Brine*, 211 F.3d 588, 590 (Fed. Cir. 2000) ("The fact that delivery was set for dates after the critical date is irrelevant to the finding of a commercial offer to sell.").

The invention of the patents-in-suit was offered for sale more than a year before the initial patent application was filed. Defendants' motion for summary judgment that the patents-in-suit are invalid under § 102(b) is therefore granted.

IV. OBVIOUSNESS

Defendant United World Telecom, on behalf of all defendants, moves to have both patents-in-suit declared invalid as obvious under 35 U.S.C. § 103(a). The Supreme Court has explained that "[w]hile the ultimate question of patent validity is one of law," several "factual inquiries" are relevant to the determination: "the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved." *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Furthermore, "secondary considerations" such as "commercial success, long felt but unsolved needs, failure of others, etc." may also come into play. *Id.* at 17-18. As the Federal Circuit has explained, all this is a

¹⁵ The court does not reach defendants' argument that Alleman's activity in providing services to individuals according to the method and system claimed in the patents-in-suit using his 386 system was a public use of the claimed invention.

1 framework for determining "whether a person of ordinary skill in the art would have been motivated
2 to combine the prior art to achieve the claimed invention and whether there would have been a
3 reasonable expectation of success in doing so." *DyStar Textilfarben GmbH & Co. Deutschland KG*
4 *v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006). However, the question of what is the
5 appropriate test for judging obviousness is pending before the Supreme Court in *KSR Intern. Co. v.*
6 *Teleflex, Inc.*, 126 S.Ct. 2965 (Mem.) (2006), and the outcome of that case could impact the
7 obviousness analysis in this case.

8 Defendant United World Telecom's argument for the obviousness of all asserted claims
9 begins with claim 11 of the '027 patent (which now stands finally rejected by the PTO), which reads:

10 In a method for economically using differences in tariff rates for international calls by
11 originating calls from a location having relatively lower tariff rates to a location
12 having relatively higher rates, in which a subscriber calls a service located in a
13 jurisdiction having relatively low cost outbound calls, the service calls the subscriber
14 back on an outbound circuit, the subscriber enters the telephone number of the called
15 party in the called party's jurisdiction, the service calls the called party on a second
16 outbound circuit, and the service bridges the two circuits to telephonically connect
17 the subscriber and the called party, the improvement comprising

18 using direct inward dialing for the initial call from the subscriber to the service,
19 and

20 the subscriber hangs up before there is a charge for the call from the subscriber to
21 the service.

22 '027 patent, col. 10, line 63-col.12, line 4 (formatting altered). Defendant's argument for invalidity,
23 as the court understands it, is based upon the following logic: (1) because claim 11 is in Jepson
24 format, the preamble is admitted to be prior art; (2) Cygnus argued and the PTO stated during
25 prosecution that the point of novelty of the invention was using a DID number to identify the
26 subscriber; (3) it would have been obvious to one of ordinary skill in the art to combine DID
27 identification with the admitted prior art of the preamble of claim 11 of the '027 patent; and (4)
28 because the preamble of claim 11 of the '027 patent is admitted as prior art, there is no need to
analyze the obviousness of the claims-at-issue limitation by limitation; rather, all that is required to
prove obviousness is a showing that it would have been obvious to one of ordinary skill in the art to

1 combine the preamble of claim 11 of the '027 patent with the use of DID numbers to identify
2 subscribers.¹⁶ See 103 Mot. (dkt. # 674) at 9-16.

3 Cygnus's opposition, as far as the court can make it out, is that defendants have not shown
4 that all limitations of each claim at issue are present in the prior art and that it would have been
5 obvious to one of ordinary skill in the art to combine them. Defendant United World Telecom does
6 present references which it represents are prior art disclosures of the limitations of claims 1 and 6 of
7 both patents-in-suit. See Weisberg Decl. (dkt. # 677), Ex. 21. Defendant does not, however, show
8 that the combination of all the limitations of these claims are found in the prior art except to the
9 extent purportedly admitted by Cygnus, nor does defendant show that one of ordinary skill in the art
10 would be motivated to combine the limitations of any claim at issue. "Although a preamble is
11 impliedly admitted to be prior art when a Jepson claim is used unless the preamble is the inventor's
12 own work, the claimed invention consists of the preamble in combination with the improvement."
13 *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 315 (Fed. Cir. 1985) (citations omitted).
14 Defendant has in essence handed the court the pieces of a jigsaw puzzle and asked the court to
15 assemble it. Defendant has not shown "whether a person of ordinary skill in the art would have been
16 motivated to combine the prior art to achieve the claimed invention and whether there would have
17 been a reasonable expectation of success in doing so." *Dystar*, 464 F.3d at 1360. Defendant United
18 World Telecom's motion for summary judgment on behalf of all defendants that the patents-in-suit
19 are invalid as obvious is therefore denied.

21
22 ¹⁶ The parties' briefing on this issue contains scant citation to case law. The court's own research
23 did not uncover a case in which the Federal Circuit directly addressed the issue of whether the
24 admission of prior art for one Jepson claim should be construed as an admission only as to that
25 Jepson claim or all claims in the same patent or, in addition, to claims in related patents. See *Rowe*
26 *v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997) (all claims considered together because patent applicant
27 had not addressed claims separately below); *Sjolund v. Musland*, 847 F.2d 1573 (Fed. Cir. 1988) (all
28 claims at issue in Jepson format); *Pentec, Inc. v. Graphic Controls Corp.* 776 F.2d 309, 312 (Fed.
Cir. 1985) (all claims at issue in Jepson format); *In re Fout*, 675 F.2d 297, 298 (C.C.P.A. 1982)
(unclear whether any claims were not in Jepson format); see also *Catalina Mktg. Int'l v.*
Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002) ("Whether to treat a preamble as a
limitation is a determination resolved only on review of the entire patent to gain an understanding of
what the inventors actually invented and intended to encompass by the claim.") (quotation marks,
brackets, and ellipses omitted).

VI. INFRINGEMENT

A. Infringement Judged on Court's Claim Construction

Plaintiff Cygnus and several defendants have made motions for summary judgment of infringement or non-infringement of the patents-in-suit which must necessarily be determined using the court's claim construction. "An infringement analysis involves two steps. First, the court determines the scope and meaning of the patent claims asserted, and then the properly construed claims are compared to the allegedly infringing device." *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1992) (internal citations omitted).

Cygnus describes the patents-in-suit as covering "the uncompleted call signaling configuration of international call-back." This description is far too broad in light of the court's claim construction. However, the court did not adopt all of defendants' claim construction positions, either. The parties' arguments for summary judgment are addressed based upon the court's construction of the patent claims at issue.¹⁷

B. Individual Summary Judgment Motions on Infringement

1. United World Telecom

In case no. C-03-03596, Cygnus and defendant United World Telecom ("UWT") have made cross-motions for summary judgment regarding whether UWT infringes the patents-in-suit.¹⁸

¹⁷ Several defendants claim that under the Federal Circuit's decision in *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282 (2005), they cannot be liable for infringing the asserted method claims because certain steps, such as "the subscriber terminates the incoming call attempt," are for international call-back not performed in the United States. The Federal Circuit did hold that the performance outside of the United States of any step of a method claim precluded a finding of patent infringement. *Id.* at 1318. However, the Federal Circuit stated that it did "not hold that method claims may not be infringed under the 'sells' and 'offers to sell' prongs of section 271(a)." *Id.* at 1320-21. All defendants who make arguments are located in the United States, so at the very least, disputed issues of material fact remain as to whether *NTP* prevents them from being liable for infringing the asserted method claims.

¹⁸ At the hearing on these motions, UWT moved to strike reference to Cygnus's exhibits 299 and 400 through 404 because those exhibits were not served with Cygnus's motion for summary judgment against UWT. The court granted the motion. *See* Fed. R. Civ. P. 56(e) (supporting evidence shall be served with motion). Cygnus later argued that it had indeed served these six exhibits upon UWT. Revised MSJ - UWT (dkt. # 751) at 2. Examination of clerk's file reveals that the Sutton declaration served with Cygnus's original motion for summary judgment against UWT neither referred to exhibits 299 or 400 through 404 nor had any of them attached. *See* Sutton Decl. (dkt. # 689). However, because Cygnus's arguments based upon these exhibits are not persuasive,

1 Some form of direct inward dialing appears in all of the asserted claims.¹⁹ Cygnus argues
 2 that exhibits 400, 401, and 404 show that UWT refers to the telephone numbers that UWT's
 3 subscribers dial to trigger call-back as "DID." What UWT calls these numbers is irrelevant to
 4 infringement analysis; if Cygnus could prove infringement by showing that UWT merely used
 5 Cygnus's terminology, claim construction would be unnecessary. Cygnus has presented no evidence
 6 that the "DID" referred to by UWT is "the last four or five numbers dialed by a subscriber which are
 7 passed to the system over a trunk line capable of carrying a direct inward dial number."

8 Cygnus also argues that exhibits 401, 402, and 403 are evidence that UWT allows customers
 9 to "trigger," *i.e.*, initiate or precipitate, call-back.²⁰ However, showing that UWT allows "triggering"
 10 of calls only goes part of the way towards proving UWT infringes claim 1 of the '027 patent, the
 11 only asserted claim in which "triggering" appears. Even if the court did not consider the evidence
 12 presented by UWT, Cygnus has fallen far short of showing that any method or device used by UWT
 13 meets each limitation of any one of the asserted claims, requiring the court to deny Cygnus's motion
 14 for summary judgment against UWT.²¹

15 In connection with its cross-motion for summary judgment, UWT offers the declaration of
 16 Thierry Genoyer as evidence regarding its call-back operations. However, this declaration was

17 for the sake of argument, the court will assume the exhibits show the facts Cygnus argues that they
 18 show.

19 ¹⁹ The phrase "direct inward dial telephone number" appears in claim 1 of the '964 patent seven
 20 times. '964 patent, col. 10, ll. 10-11, 17, 20, 26-30. It appears in claim 6 of the same patent six
 21 times. *Id.*, col. 10, l. 66, col. 11, ll. 3-4, 7-11. The phrase "direct inward dial number" appears
 twice in claim 1 of the '027 patent.

22 ²⁰ Cygnus also argues that evidence of how defendants presently provide call-back services is
 23 relevant to claim construction. It is not. "[C]laims may not be construed by reference to the accused
 device." *NeoMagic Corp. v. Trident Microsystems, Inc.*, 287 F.3d 1062, 1074 (Fed. Cir. 2002).

24 ²¹ The hearing on these motions was held on November 21, 2006. On December 2, 2006, Cygnus
 25 filed a "revised" motion for summary judgment against UWT. Revised MSJ - UWT (dkt. # 751).
 26 Cygnus's justification for doing so was that the court had excluded Cygnus's exhibits 299 and 400
 27 through 404, which Cygnus mistakenly asserted had been filed with its original motion. As
 28 Cygnus's premise for filing its revised motion is incorrect, the court denies Cygnus leave to file the
 motion. *See* Civil L.R. 7-3(d) ("[O]nce a reply is filed, no additional memoranda, papers or letters
 may be filed without prior Court approval."). As the court will not consider the revised motion
 against UWT, AT&T's motion to strike Cygnus's revised motion as an improper attempt for Cygnus
 to reargue aspects of claim construction relevant to defendants other than UWT (*see* Mot. Strike,
 dkt. # 755) is moot.

1 submitted marked "under seal" purportedly "pursuant to the Court's Protective Order," but UWT did
2 not make a motion to seal as required by Civil L.R. 79-5 or submit a proposed order. *See* Notice
3 (dkt. # 120 in case no. C-03-03596). At the request of Cygnus, the magistrate judge assigned to this
4 case extended a protective order that initially covered case no. C-02-00145 to all to all consolidated
5 proceedings (*see* Protective Order, dkt. # 641). The magistrate judge altered the stipulated
6 protective order in case no. C-02-00145 to specifically require the parties to comply with Civil L.R.
7 79-5. Protective Order (dkt. # 19 in case no. C-02-00145) ¶ 3. Under Civil L.R. 79-5(a), "[a]
8 stipulation, or a blanket protective order that allows a party to designate documents as sealable, will
9 not suffice to allow the filing of documents under seal." Cygnus objects that there is no court order
10 allowing the Genoyer declaration to be filed under seal. As Cygnus is correct, the court will not
11 consider the Genoyer declaration lodged on November 6, 2006, and clerk shall return it to UWT as
12 required by Civil L.R. 79-5(e).

13 Although UWT lacks any competent evidence that it does not infringe, as the defendant,
14 UWT may still be entitled to summary judgment by pointing out that Cygnus lacks evidence of a
15 necessary element of a claim. *See Nissan Fire & Marine Ins. Co. v. Fritz Cos.*, 210 F.3d 1099, 1102
16 (9th Cir. 2000). As discussed above, Cygnus has not presented evidence that UWT's methods or
17 devices meet each limitation of the asserted claims. UWT's motion for summary judgment that it
18 does not infringe the patents-in-suit is therefore granted.

19 **2. Dial-Thru International**

20 Cygnus moves for summary judgment of liability for infringement but not damages against
21 defendant Dial-Thru International in case no. C-02-00142. The evidence that Cygnus presents in
22 support of its motion is similar to that it seeks to present in connection with its motion for summary
23 judgment against UWT. Cygnus offers printouts from several websites that show Dial-Thru and
24 companies Dial-Thru acquired refer to DID numbers. *See* Cygnus Exs. 199 ("Callback works by
25 assigning you a personal access number (called a 'DID number')."), 412 ("Enter DID"), 413 ("Your
26 Access Code (DID)"), 414 ("Dial around works by assigning you a personal access number (called a
27 'DID number')."), 415 ("Enter your 10 digit DID number (the number given to you when you signed
28

up)"). Beyond the fact that certain websites mention a "DID number," Cygnus has no evidence that Dial-Thru infringes any claims of the patents-in-suit.

Cygnus does, however, recite that Dial-Thru's methods and devices contain the limitations of each of the five asserted claims. *See* MSJ - Dial-Thru (dkt. # 686) at 5-7. This recitation is without reference to and is completely unsupported by any evidence. In addition, Dial-Thru presents evidence that its subscribers do not trigger call-back using a DID number. Instead, for some services, customers dial a telephone number and a device associated with that telephone number sends an "alphanumeric sequence" of "at least seven characters" over the internet to Dial-Thru's facilities. Jenkins Decl. (dkt. # 262 in case no. C-02-00142) ¶¶ 6-7, 9-10. In some of these services, all customers in the same country call the same phone numbers for service. *Id.* ¶ 10. For other Dial-Thru services, the customer does not dial a telephone number at all, but instead transmits an "alphanumeric sequence" of "at least seven character[s]" via "e-mail," "SMS message," or "a webpage" to Dial-Thru. *Id.* ¶ 8. Dial-Thru also explains that it referred to customers' access numbers as DID numbers to avoid confusing them, even after the method of providing service no longer used DID technology.²² *Id.* ¶ 12. This evidence shows that these services of Dial-Thru do not use DID numbers in the sense required by the patents-in-suit because passing "alphanumeric sequences" over the internet is not passing DID numbers "over a trunk line capable of carrying a direct inward dial number."

Cygnus's motion for summary judgment against Dial-Thru is denied.²³

3. GlobalPhone Corp.

Cygnus moves for summary judgment of infringement but not damages against defendant GlobalPhone Corp. in case no. C-02-05437. The evidence Cygnus presents in support of its motion is merely a general description of how GlobalPhone's service works from GlobalPhone's website.

²² "[W]hen a claim term understood to have a narrow meaning when the application is filed later acquires a broader definition, the literal scope of the term is limited to what it was understood to mean at the time of filing." *Kopykake Enters. v. Lucks Co.*, 264 F.3d 1377, 1383 (Fed. Cir. 2001).

²³ Dial-Thru requests that its motion for summary judgment of non-infringement be granted. Opp'n (dkt. # 242 in case no. C-02-00142) at 12. Dial-Thru has not, however, noticed a motion for summary judgment since the court denied its 2003 motion for summary judgment.

1 See Cygnus Exs. 417, 418. Cygnus also repeats its erroneous assertion that because GlobalPhone
 2 uses ten-digit access numbers, it necessarily uses DID numbers. Although not required to,
 3 GlobalPhone presents evidence that some of its services do not use DID numbers within the
 4 meaning of the patents-in-suit. See McCarthy Decl. (dkt. #) ¶¶ 4-7. Cygnus's motion for summary
 5 judgment against Dial-Thru is denied.^{24, 25}

6 **4. World-Link, Inc. and Americom, Inc.**

7 In case no. C-03-04003, defendant World-Link, Inc. moves for summary judgment that it
 8 does not infringe the patents-in-suit. World-Link asserts that Cygnus lacks any evidence that World-
 9 Link's methods or devices infringe any one of the asserted claims. In response, Cygnus presents
 10 pages from World-Link's website explaining how World-Link's service works. Cygnus Ex. 425.
 11 This website indicates that each World-Link customer has an unique phone number he or she dials
 12 to access World-Link's service. *Id.* Beyond this, Cygnus has no evidence of how World-Link's
 13 services operate. On the other hand, World-Link presents a declaration, which although somewhat
 14 conclusory, states that "[n]one of the technologies used by World-Link for international callback
 15 services, whether sold to end-users or to carrier customers, used or included DID numbers" and that
 16 "[a]ll technologies used by World-Link for international callback send at least ten digits of the
 17 telephone number dialed by the customer over a digital signaling facility." Stamoulis Decl. (dkt. #
 18 102-3 in C-03-04003 ¶¶ 8, 11).

19 Cygnus lacks evidence that any method or device used by World-Link meets all the
 20 limitations of any asserted claim. World-Link's motion for summary judgment that it does not
 21 infringe either patent-in-suit is therefore granted.

22 Defendant Americom, Inc. joins World-Link's motion. Americom presents evidence that it
 23 only resells the services of World-Link and IDT. Kreutzer Decl. (dkt. # 716) ¶ 3. IDT settled with
 24 Cygnus; the settlement covered IDT services resold by Americom. *Id.* ¶ 4. Cygnus does not contest

25 ²⁴ GlobalPhone also requests that its motion for summary judgment of non-infringement be granted.
 26 Opp'n (dkt. # 186 in case no. C-02-05437) at 10. GlobalPhone has not, however, noticed a motion
 27 for summary judgment since the court denied its earlier motion for summary judgment made in
 28 2003.

²⁵ Neither side's complaints about the other's conduct in discovery warrants consideration.

1 these facts. *See* Opp'n (dkt. # 729) at 3. As World-Link's motion for summary judgment has been
 2 granted, Americom is likewise entitled to summary judgment that it does not infringe the patents-in-
 3 suit.

4 **5. A.M.S. Voicecom, Inc.**

5 A.M.S. Voicecom, Inc. ("AMS") is also a defendant in case no. C-03-04003. AMS moves
 6 for summary judgment of non-infringement. As support for its motion, AMS presents evidence that
 7 instead of using "DID number" technology to provide call-back services, AMS uses only "Primary
 8 Rate Interface ('PRI') (a type of ISDN)." Guler Decl. (dkt. # 708) ¶¶ 24-25. In opposition, Cygnus
 9 presents an AMS webpage that mentions "Your 7 or 10 Digit DID (Key#) Number." Cygnus Ex.
 10 421. Cygnus argues but presents no evidence that AMS's "PRI/ISDN exchange" is equivalent to the
 11 use of DID numbers. Opp'n (dkt. # 727) at 3. AMS has presented evidence that it does not use DID
 12 numbers within the meaning of the patents-in-suit. Cygnus has no evidence to the contrary and
 13 therefore lacks evidence sufficient to prove that AMS infringes any asserted claim. AMS's motion
 14 for summary judgment is granted.

15 **VII. PROCEDURAL OBJECTIONS**

16 The parties raise several procedural objections. *See, e.g.*, 103 & 112 Opp'n (dkt. # 698) at 1-
 17 3. Any procedural objections not addressed elsewhere are relatively minor and in light of past
 18 history balance out and do not affect significant substantive rights. Given the lengthy nature of these
 19 proceedings, deciding issues on the merits is preferable.

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VIII. ORDER

For the reasons given above, the court:

1. Construes the disputed language of the claims as follows:

Term or phrase	Court's construction
"after the subscriber terminates the incoming call attempt"	no construction necessary
order of steps of claim 6 of '964 patent	Steps [1], [2], and [3] may occur in any order relative to each other, but all must occur before step [4]. After step [4], steps [a][ii], [a][i], [a][iii], [b], [c] and [d] must occur in that sequence.
"direct inward dial telephone number"	the last four or five numbers dialed by a subscriber which are passed to the system over a trunk line capable of carrying a direct inward dial number
"telephone communication link"	no construction necessary
"telephone exchange"	a system of electronic components that connects telephone calls
"telephone connection means"	"means-plus-function" limitation with function of being operable for connecting and receiving with corresponding structure of a telephone line or its equivalent
"telephone exchange connection"	telephone line
"subscriber telephone station"	a device that allows audio communication over a telephone network
"dialing"	no construction necessary
"calling"	no construction necessary
"trunk line"	a phone line specially configured to pass a DID number along with a call
"service center"	the central location at which the system apparatus carries out the process of the invention
"enters"	dials
"triggered"	initiated or precipitated
"control means"	means-plus-function limitation with eight functions (managing a data base, comparing, calling the subscriber, connecting to the subscriber station, receiving, calling the destination, connecting to the destination, and bridging) with corresponding structure of a computer or its equivalent
"automatic bridging device"	no construction necessary

2. Denies defendants' motion that the patents-in-suit are invalid because certain limitations are indefinite;

3. Denies defendants' motion that the patents-in-suit are invalid for failure to disclose the best mode in violation of 35 U.S.C. § 112 ¶ 1;

4. Grants defendants' motion that the patents-in-suit are invalid under the on-sale bar of 35 U.S.C. § 102(b);

5. Denies defendants' motion that the patents-in-suit are obvious under 35 U.S.C. § 103(a);

6. Denies Cygnus's motion for leave to file a revised motion for summary judgment against UWT;

7. Denies Cygnus's motions for summary judgment of infringement against UWT, Dial-Thru, and GlobalPhone;


8. Grants the motions of UWT, World-Link, Americom, and AMS for summary judgment of non-infringement;

9. Overrules all procedural objections not elsewhere addressed; and

10. Requests the clerk return the Genoyer declaration lodged on November 6, 2006 to UWT pursuant to Civil L.R. 79-5(e).

As this order disposes of all claims in these consolidated proceedings except case no. C-04-04247, judgments will be entered in favor of all defendants in the pending cases except case no. C-04-04247.

DATED: 3/29/07


RONALD M. WHYTE
United States District Judge

1 A copy of this order was mailed on 3/30/07 to:

2 **Counsel for Plaintiff:**

3 John P. Sutton
2421 Pierce Street
4 San Francisco, CA 94115-1131

5 Gregory J. Nelson
Nelson & Roediger
6 3333 E Camelback Road, Suite 212
Phoenix, AZ 85018

7 Peter Neil Greenfeld
8 Greenfeld Law Group
3333 E Camelback Road, Suite 212
9 Phoenix, AZ 85018-2324

10 **Counsel for Defendants:**

11 Alan M. Weisberg, Steven M. Greenberg
Christopher & Weisberg, P.A.
12 200 E. Las Olas Avenue, Suite 2040
Fort Lauderdale, FL 33301

13 John C. Carey
14 Rodriguez Greenberg & Paul
1395 Brickell Ave, Suite 700
15 Miami, FL 33131

16 Felice B. Galant, Gregory B. Wood
Fulbright & Jaworski L.L.P.
17 865 South Figueroa Street
Twenty-Ninth Floor
18 Los Angeles, CA 90017

19 Joseph P. Zammit
Fulbright & Jaworski
20 666 Fifth Avenue
New York, NY 10103

21 John F. Mardula, Jon L. Roberts
22 Roberts Mardula & Wertheim, LLC
11800 Sunrise Valley Drive, Suite 1000
23 Reston, VA 20191-5302

24 Jeffrey L. Silvestrini, Brian F. Roberts
Cohne Rappaport & Segal
25 P.O. Box 11008
Salt Lake City, UT 84147-0008

1 Raymond J. Etcheverry
Parsons, Behle & Latimer
2 One Utah Center
201 South Main Street,
3 Suite 1800, Post Office Box 45898
Salt Lake City, UT 84145

4 Kieran Patrick Fallon
5 436 SW 8th Street
Miami, FL 33130-2814

6 Matthew Francis McGahren
7 Baum & McGahren
6171 Crooked Creek Road
8 Norcross, GA 30092

9 Thomas T. Tamlyn
Yeskoo Hogan & Tamlyn, LLP
10 535 Fifth Avenue
New York, NY 10017

11 Peter S. Canelias
12 Law Offices of Peter S. Canelias
420 Lexington Avenue, Suite 2148
13 New York, NY 10170

14 Elizabeth E. Green, R. Scott Shuker
Gronek & Latham, LLP
15 390 N. Orange Avenue, Suite 600
Orlando, FL 32801

16 **Courtesy Copy:**

17 Clerk of the Panel on Multidistrict Litigation
18 Thurgood Marshall Federal Judiciary Building
One Columbus Circle, N.E.
19 Room G-255, North Lobby
Washington, DC 20002-8004

20 Counsel is responsible for distributing copies of this order to co-counsel, as necessary.
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